

ABSTRACT

A USB interface having improved EMC immunity where the D+, D-, and USB ground lines each pass through a common mode choke. The USB 5V line is AC coupled to the USB ground line outside the choke and routed through a high impedance into the circuit while maintaining the integrity of the signal. In addition, bypass capacitors, such as Tantalum bypass capacitors, and a 5.6V Transorb device are added to the 5V power supply of the controller, and all unused pins are terminated to reduce unwanted ringing transients in the controller leadframe. In addition, small capacitors within the capacitive loading specification allowed by the USB-IF are positioned next to the controller on each data line.